CHAPTER 3

The Nuclear Straitjacket

AMERICAN EXTENDED DETERRENCE AND NONPROLIFERATION

Benoit Pelopidas

In this chapter, I discuss the future of US extended nuclear deterrence and the possibility of change in nuclear weapons and alliance policies. While several chapters in this book document and analyze the limits of extended deterrence arrangements, the goal of this chapter is to take a step back and look at the understanding of history that frames possible and desirable change in US nuclear weapons policy and submit it to historical critique based on European case studies.[1] I start by asking a specific question: Does the historical record suggest that extended nuclear deterrence has been a relevant tool for nuclear nonproliferation? To answer it, I identify a common and problematic framing of the question, the nuclear straitjacket, and analyze its policy implications before focusing on two European case studies: the United Kingdom and France.[2]

The nuclear straitjacket frames the requirements of national security as a binary choice between nuclear security guarantees from an ally and the quest for an independent nuclear deterrent. I call it the nuclear straitjacket because it limits itself to two ultimate security guarantors, both of which are nuclear. Most important, it does not leave any room for a third understanding of national security that would not rely on nuclear weapons.

To assess the nuclear straitjacket, negative security guarantees will be set aside and the focus will be on the positive ones.[3] In other words, the security guarantees coming from a nuclear-weapons-free zone (NWFZ) membership or a non-nuclear status under the nonproliferation treaty (NPT) are outside the realm of this analysis. The relationship that will be tested as a decisive component of the nuclear straitjacket is based on a strategy of

extended nuclear deterrence.[4] This strategy introduces a relationship among three types of actors: the protector, the protégé, and the potential aggressor.[5] It is worth highlighting that these are categories of actors and not single actors; thus, the number of actors in each category can be more than one.

The nuclear straitjacket assumes a specific type of this relationship based on the idea that extended nuclear deterrence is a necessary tool for nuclear nonproliferation and disarmament, which are two modalities of renunciation of nuclear weapons.[6] It significantly affects the relationship I have just depicted. Classical extended deterrence is a promise of action from the protector that is expected to deter the potential aggressor from attacking the protégé. If you consider that these weapons have to play a role in nonproliferation policy or, more broadly, in a policy producing incentives to give up nuclear weapons ambitions, the assumptions about the relationship among the three types of players become much more demanding. The protector is still threatening to use its weapons to deter the potential aggressor from attacking but, in addition, this move from the protector is supposed to have an impact on the protégé and deter it from producing its own nuclear weapons. It is now clearer how the notion of nuclear straitjacket is based on the idea that a commitment of extended nuclear deterrence is at least a necessary condition for renunciation of nuclear weapons.

In this chapter, I will demonstrate the importance of identifying and investigating the nuclear straitjacket and test the version of the nuclear straitjacket that assumes that positive nuclear security guarantees are both necessary and sufficient conditions across cases for states to give up nuclear weapons. Even though there is less commentary implying that nuclear security guarantees are sufficient because of the credibility issue, it is worth showing that even when they were as credible as possible, they were still not sufficient to prevent proliferation.[7] This is why I focus on the United Kingdom and France before 1957–1958: They were founding members of NATO and close US allies, in a context in which only few other states possessed nuclear weapons and the protector's homeland was not yet vulnerable to a massive nuclear retaliatory strike from the potential aggressor, which made its pledge of using nuclear weapons against the aggressor of an ally as credible as possible. To do so, I will show that (1) the nuclear straitjacket is implicit in the mainstream paradigms of international relations (IR) theory dealing with proliferation issues, and (2) it has political effects on the framing of possible and desirable nuclear weapons policies in the United States even though (3) it is not supported by the historical record and does not adequately portray the way French and British leaders conceived of the nuclear choices they could make.

The Nuclear Straitjacket and Nuclear History in Mainstream International Relations

In international relations theory, the most famous proponents of structural realism, area studies specialists inspired by it, and even critical voices have formulated forecasts and policy recommendations based on the nuclear straitjacket, even if their analytical assessments are often formulated in probabilistic terms.[8] Major proponents of structural realism argued that the protection offered by the two superpowers during the Cold War was the essential cause of nuclear nonproliferation during that period. This led to a series of proliferation forecasts about the post–Cold War period.[9] Benjamin Frankel offers the clearest formulation of this alternative when he writes that "there is an inherent contradiction between welcoming the end of bipolarity and deploring the spread of nuclear weapons" and "it is precisely the large size and sophistication of the superpowers' nuclear forces, and the avowed willingness of the superpowers to threaten to use them on behalf of their clients, . . . that have prevented a more pervasive weapons proliferation."[10] Most recently, Michael Horowitz phrases the nuclear straitjacket in terms of likelihood when he writes that "[i]n a world where progress towards arms reductions reverses, some states with civilian nuclear power might begin to prepare quietly for a world where they need to build their own small nuclear arsenal. Such an outcome might become likely if the economic struggles in the United States lead the country to pull back significantly from its international obligations, including its extended deterrence umbrella."[11]

A similar tendency can be identified in works of area studies specialists inspired by structural realism. Beyond the works of John Mearsheimer on the necessity of an independent nuclear deterrent in Ukraine, Fiona Hill and Pamela Jewett can be mentioned.[12] A few months before Kiev decided to give its weapons back to Russia, it insisted on the protection that these weapons would offer against a Russia depicted as expansionist, notably because of the remaining Russian minority in Eastern Ukraine.[13] Similarly, Yair Evron accepts the idea that the end of bipolarity created additional incentives to get nuclear weapons.[14] Some interpretations of the German case and, more broadly, of nuclear abstinence inside the European community tend to rely on the nuclear straitjacket.[15] Most recently, Andrew Kennedy argued that "implicit nuclear umbrellas" and disarmament diplomacy were key drivers of Indian nuclear restraint until 1998.[16]

Even critical voices like Glenn Chafetz, who intends to build an "alternative to the neo-realist perspective" for the post–Cold War world, ends up transposing the argument of the nuclear straitjacket at the level of

perceptions. In his view, what matters for forecasting proliferation is not whether the protector will maintain its security guarantee but if the protégé believes the protector will do so.[17] This approach leaves room for the possibility that the protégé could misinterpret the intentions of the protector and decide not to go for the bomb even though the protector has not made a sincere credible pledge. Thus, the protégé in this instance would not go nuclear because it believes that the protector's defective pledge of extended nuclear deterrence is valid. The fact that the protégé makes a mistake should not mask that its supposed reasoning remains the same.[18] Most recently, Francis Gavin argues that the resolve to strike as a foundation of a credible nuclear security guarantee might have created incentives to go for the bomb for countries to which the deterrent pledge is not extended, but he does not criticize the efficacy of extended nuclear deterrence as a nonproliferation tool.[19]

The latest instance of the nuclear straitjacket can be found in the contemporary studies of the Saudi case in the context of the Iranian nuclear crisis. The two sides of the nuclear straitjacket now appear as prominent voices in the discussion: Either Saudi Arabia will receive a nuclear security guarantee from the United States, or it will develop its own nuclear arsenal in the near future.[20] The nuclear straitjacket, defined as an alternative between nuclear positive security guarantees and the quest for an independent nuclear deterrent, seems to be an implicit understanding of nuclear choices for more than just structural realist IR theorists. Let us now examine the impact of this view on contemporary debates related to nuclear weapons.

The Political Effects of the Nuclear Straitjacket on Contemporary US Debates

The Russian Federation and the United States possess more than 90 percent of the nuclear warheads on Earth, and these two states are still using some form of extended nuclear deterrence inherited from the Cold War.[21] The Russian military doctrine of 2000 read that:

> The Russian Federation will not use nuclear weapons against states party to the Nonproliferation Treaty that do not possess nuclear weapons except in the event of an attack on the Russian Federation, the Russian Federation Armed Forces or other troops, its allies, or a state to which it has security commitments that is carried out or supported by a state without nuclear weapons jointly or in the context of allied commitments with a state with nuclear weapons.[22]

The doctrines published in February 2010 and December 2014 repeat the same idea.[23] The Russian commitments under the Tashkent Treaty (also known as the Collective Security Treaty) suggest, however, that an attack against one member of the alliance is tantamount to an attack against all, and this in turn suggests a commitment that is close to the concept of extended nuclear deterrence.[24] Even if that is the case, and given that it is not the essential mission assigned to Russian nuclear forces, the United States is the only country that cites the requirements of extended nuclear deterrence as justifying the size of its arsenal.[25]

The other nuclear weapons states, whose arsenals are considerably smaller, adopt three different attitudes toward extended nuclear deterrence, all of which have one thing in common: None of them use the criterion of the imperative to protect allies to justify the size of the national arsenal. Some offer an extended nuclear deterrence of some sort to other states without legally binding agreements, a second group does not offer extended nuclear deterrence at all, and a third group not only refrains from offering it but publicly criticizes the United States and Russia for their extended deterrence commitments.

In the 2008 and 2013 *White Books on National Defense and Security*, France reaffirms that its strategic nuclear forces contribute to the security of the EU and NATO. This builds on the 1974 Ottawa Declaration, which states that its nuclear forces are "capable of playing a deterrent role of their own contributing to the overall strengthening of the deterrence of the Alliance."[26] It does not refer to extended deterrence to justify the size of its nuclear arsenal. The 2008 *White Book* insists on the independence of the national nuclear forces vis-à-vis NATO and the fact that the engagement of French forces in any case would not be automatic.[27] Thus, "France will keep on maintaining its nuclear forces at a level of strict sufficiency. Paris will adjust them constantly at the lowest level compatible with its security."[28] Compared to the American case, what can be called a French extended deterrence is offered to allies that do not necessarily demand it or might even be opposed to it.[29] Except for the Lisbon Treaty, these French commitments are not legally binding. In spite of the first comments that were given, the defense agreement between France and the United Arab Emirates signed in 2009 cannot be considered as an extended deterrence agreement. The assessments stating that France was committing itself to guarantee the security of the Emirates with all means at its disposal, including nuclear weapons, have been denied by the French authorities.[30]

In the second category, the United Kingdom, India, Pakistan, and North Korea simply do not offer any form of extended nuclear deterrence.[31] Israel

obviously does not do it either because one of the requirements of an extended deterrence pledge is that the protector has to convey the message clearly both to the protégé and the potential aggressor. Israel's official policy of not being the first nation to introduce nuclear weapons in the Middle East does not make this possible.[32]

Finally, in the third category, China sticks to the notion of minimum deterrence.[33] It does not practice extended nuclear deterrence and has issued several proposals to give incentives to the United States and Russia to give up this practice.[34]

With respect to contemporary positive nuclear security guarantees, the United States is thus an exceptional case because it both offers positive nuclear security guarantees and defines the size of its nuclear arsenal based on the perceived requirements of these guarantees. This suggests that it is necessary to focus on the US case in order to assess the historical record of the nuclear straitjacket. The nuclear straitjacket has three consequences: justification of past extended deterrence policies as successes in nonproliferation, denial of the possibility for the protector to give up nuclear weapons, and limitation of the possible reduction of its arsenal in the name of nonproliferation.

Since the beginning of NATO, US positive nuclear security guarantees have been part of a policy of reassurance toward its allies, one that has continued after the end of the Cold War.[35] On October 18, 2006, less than ten days after the first North Korean nuclear test, US secretary of state Condoleezza Rice went to Tokyo and declared publicly that "[t]he United States has the will and capability to meet the full range—and I underscore full range—of its deterrent and security commitments to Japan."[36] Three days later, US secretary of defense Donald Rumsfeld reaffirmed US support for South Korea who, he said, was still included under a US "nuclear umbrella."[37] His successor, Robert Gates, made a similar move on October 21, 2009, five months after the second North Korean nuclear test.[38] The United States has long made similar declarations with respect to the Atlantic Alliance in Europe and, at least until the 2010 Nuclear Posture Review (NPR), its extended deterrence commitments have represented positive nuclear security guarantees that included potential first use of nuclear weapons to protect an ally that would be attacked with chemical, biological, or nuclear weapons.[39]

Beyond the goal of reassurance, this practice of offering positive nuclear security guarantees is now presented as a nonproliferation tool and it has been retrospectively declared successful in that respect. This is the first political effect of the nuclear straitjacket. In December 2008, the Report of the Secretary of Defense Task Force on DOD Nuclear Weapons Management stated

that "[t]he United States has extended its nuclear protective umbrella to 30-plus friends and allies as an expression of commitment and common purpose as well as a disincentive for proliferation."[40] This report also quotes the 1998 annual defense report stating that "[n]uclear forces remain an important disincentive to nuclear, biological, and chemical proliferation."[41] The exact same idea is expressed in the May 2009 report to the US Congress in preparation for the Nuclear Posture Review. "During the Cold War," it said, "proliferation was strongly inhibited by the relationships of extended deterrence established by the United States (and also by the Soviet Union)."[42] One can argue that during the Cold War, the politics of the two blocs were based on the nuclear straitjacket.[43] The classical formulation of this approach is William Walker's notion of a nuclear order based on a "managed system of deterrence" and a "managed system of abstinence."[44] The meeting between French president Charles de Gaulle and US secretary of state John Foster Dulles on June 5, 1958, offers an explicit illustration of the nuclear straitjacket as a framework of the early US nonproliferation policy.[45] On the one hand, de Gaulle affirmed that France was becoming a nuclear power and intended to proceed to a test soon. As a consequence, the United States limited its nuclear cooperation with France in the name of nonproliferation. Washington argued that its resolve to protect Europe and its openness to share its strategic forces should deter the Europeans from developing autonomous nuclear arsenals.[46]

This dual role assigned to nuclear weapons—where they act both as a security guarantee for the United States and allies and as a nonproliferation tool—has another major effect beyond the justification of past extended deterrence policy as a success of nonproliferation: It limits the possible reductions in size of the US arsenal, to say nothing of complete disarmament. This reasoning has been expressed in preparatory reports leading to the 2010 Nuclear Posture Review as well as in the final document itself and in several public speeches by US officials. The report to Congress is consistent with the view previously quoted and repeats that "the United States will need to sustain a deterrent for the indefinite future."[47] This echoes several official speeches delivered by Barack Obama before and after he took office as well as by Secretary Gates. For example, in his interview with *Arms Control Today* in December 2008, president-elect Obama said the following: "I have made it clear that America will not disarm unilaterally. Indeed, as long as states retain nuclear weapons, the United States will maintain a nuclear deterrent that is strong, safe, secure, and reliable."[48] At the same time, Secretary Gates was explaining that "the nuclear arsenal is vital because the future cannot be predicted."[49] The 2010 *Quadriennal Defense Review* restated the need to

maintain a nuclear arsenal for reasons including the security of allies: "We will maintain a safe, secure, and effective nuclear arsenal to deter attack on the United States, and on our allies and partners."[50] The May 2009 Report to Congress is particularly interesting because it articulated explicitly the link between extended deterrence and the limitation of nuclear arms reduction: "A policy agenda that emphasizes unilateral reductions could weaken the deterrence of foes and the assurance of allies."[51] If even the political goal of unilateral deep reductions is described as contradictory to the US commitments in terms of extended deterrence, complete unilateral nuclear disarmament is pushed even further into the realm of the impossible. This argument about the limitation of possible arms reduction relies on the assumption that the requirements of extended deterrence justify the existence of a larger arsenal than the one that would have been assigned to the defense of the national territory only. This is articulated most clearly in the Council on Foreign Relations April 2009 report entitled *U.S. Nuclear Policy*.

> Although the United States does not need nuclear weapons to compensate for conventional military weaknesses, other states are not in a similar position—they may consider acquiring nuclear weapons to deter attacks. The United States has the responsibility to assure allies through extended deterrence commitments. This assurance helps convince many of these allies not to acquire their own nuclear weapons. . . . A related pillar, necessary to maintain the credibility of the U.S. nuclear deterrent for as long as it is needed, is to ensure that the U.S. nuclear arsenal is safe, secure and reliable.[52]

The text of the May 2009 report to the US Congress in preparation for the Nuclear Posture Review explicitly echoes this reasoning.

> [The United States] must continue to safeguard the interests of its allies [. . .]. Their assurance that extended deterrence remains credible and effective may require that the United States retain numbers or types of nuclear capabilities that it might not deem necessary if it were concerned only with its own defense.[53]

The final text of the Nuclear Posture Review restates the same two arguments about the role of extended nuclear deterrence. It is meant to reassure the allies as well as to deter them from acquiring their own nuclear weapons.

> The United States will retain the smallest possible nuclear stockpile consistent with our need to deter adversaries, reassure our allies. . . . By main-

> taining a credible nuclear deterrent, . . . we can reassure our non-nuclear allies and partners worldwide of our security commitments to them and confirm that they do not need nuclear weapons capabilities of their own.[54]

The last formulation is worth noting because it relates to the formulation of the nuclear straitjacket in terms of a necessary condition: Extended nuclear deterrence helps to convince other actors not to go nuclear but is not perceived as sufficient for preventing them from doing so. Other conventional security guarantees should be added to constitute an effective nonproliferation architecture.[55]

Now that the three political effects of the nuclear straitjacket—justifying past extended deterrence policies as successes in nonproliferation, denying the possibility for the protector to give up nuclear weapons ambitions, and limiting the possible reduction of its arsenal—have been identified, it is time to assess its historical accuracy.[56]

The Nuclear Straitjacket in France and the United Kingdom

This section will shed light on the two European nuclear weapons states as parts of a broader investigation of one side of the nuclear straitjacket: Could a positive nuclear security guarantee be a sufficient condition for giving up nuclear weapons ambitions?[57] If one admits that both the United States and the Soviet Union also committed their nuclear weapons to the protection of their allies through the Atlantic Alliance and the Warsaw Pact, any successful proliferater coming from any of these alliances should be considered an anomaly.[58]

To strengthen my critique of the positive nuclear security guarantee as a sufficient condition for giving up nuclear weapons ambitions, I test this argument against cases in which it should be easily established. To that effect, I focus on cases in which the protector's pledge is most credible, the relationship between protector and protégé is deep and well-established, and the presence of nuclear-armed powers considered as potentially hostile to the protégé is minimal. Regarding the first condition of the highest credibility of the pledge, I assume that the credibility has to do with the expected costs of keeping the pledge, and those costs are lowest when the protector is not vulnerable to a massive nuclear retaliatory strike from the protégé's expected aggressor and when the number of potential nuclear-armed aggressors is lower.[59] Those are not the only factors but, for the purpose of this essay, I will consider them as the most important ones. So I will focus on the first

years of the nuclear age, until 1957–1958, which, as shown below, meet all criteria.

At least until the successful launch of *Sputnik* in October 1957, which suggested that the Soviet rocket program was more advanced than had been expected, the French and British realized that the US homeland was not vulnerable to a massive Soviet nuclear attack.[60] There is no evidence that the earlier American concerns of the vulnerability of their homeland were communicated to their allies.[61]

On the French side, retrospective assessments suggest that a few strategists raised questions before *Sputnik*, but it did not really change the conversation.[62] We know that on November 15, 1957, four members of the new French government had a confidential meeting about the consequences of *Sputnik*, about the consequences of the increasing threat of Soviet intercontinental ballistic missiles (ICBMs) on the US homeland, and on the US commitment to deploy troops in Europe.[63]

On the British side, even *Sputnik* did not make much of a difference. Before *Sputnik*, British intelligence assessed that the trial tests of Soviet ICBMs would not be completed before 1962 and that operational quantities would not be available before 1964. After *Sputnik*, the Joint Intelligence Council maintained that it did not mean a greatly increased Soviet capacity in the near future. It never believed that there was a missile gap and, as late as January 1958, it wrote that it was "most improbable that sufficient stocks of ICBMs are now available to enable the Soviet leaders to launch a massive attack on the US, or that they will be in a position to do so for some time to come."[64] Summarizing the US and British intelligence on the issue, Michael Goodman concluded that "there were never any serious beliefs that the USSR would launch a nuclear offensive largely because the means did not exist to effectively threaten the American mainland."[65] The expected reputation costs of using nuclear weapons also increase with time if you accept the existence of a taboo or tradition of nonuse of nuclear weapons. So the costs of keeping the extended deterrence pledge were lower prior to 1958.

One might object that the doctrine of massive retaliation, publicized in January 1954, made a credible extended deterrence pledge more difficult than a doctrine that would involve using nuclear weapons later in the conflict. However, this theoretical objection is irrelevant as it does not match the perception of the European allies at the time. Reflecting in 1983 on the debate on alternatives to massive retaliation in the early 1960s, Raymond Aron offers the best summary of why the allies did not see them as improving the credibility of the US extended deterrence pledge. He writes: "Valid in the abstract, this theory [that the use of nuclear weapons becomes more credible

when it is contemplated only as a last resort, after all other means have been used] never convinced the Europeans for two main reasons: they did not accept the great battle, waged on their soil [and] they did not consent to the effort in terms of conventional weaponry which was asked of them."[66] Not only is this theoretical objection irrelevant to the actors at the time. Even if it was, it would not compensate for the fact that until 1958, the United States did not need to fear a Soviet nuclear retaliation or large reputation costs and that the allies realized it.[67]

So the credibility of the US pledge to retaliate with nuclear weapons if one of its allies is attacked is at its peak before 1957–1958 because the costs of keeping it are lower than ever and the allies know it: The US homeland is not yet vulnerable to a massive nuclear strike from the Soviet Union and there is no other nuclear-armed enemy. So if extended nuclear deterrence was a sufficient condition for nonproliferation, as assumed by the variant of the nuclear straitjacket tested here, it should be easier to establish in this period. Even then, however, the United Kingdom and France appear as two major anomalies, which will be analyzed below.[68]

Both nations are founding members of NATO and, before going nuclear, the United Kingdom had developed a special relationship with the United States: The relationship between the former imperial power and its former colony significantly improved after the First World War. I will show that, in both cases, the nuclear straitjacket does not accurately portray the set of choices available to British and French leaders as they saw it at the time.

The United Kingdom

The United Kingdom has had a strategic and nuclear partnership with the United States since the beginning of World War II, when the Crown sent Sir Henry Tizard and his scientific team to the United States to share information on nuclear energy.[69] However, London did test an A-bomb in the Monte Bello Islands on October 3, 1952, and an H-bomb in 1957–1958. This represents a strong anomaly for the variant of the nuclear straitjacket tested here for the following reasons.

First, a deep alliance between the United States and the United Kingdom has developed since the 1940s, even before the foundation of NATO. The fact that the Mutual Defense Agreement between the two countries was not signed before July 3, 1958, should not lead one to neglect the depth of cooperation since World War II.[70] The signing of the Québec Agreement, which included Canada as a third party, on August 19, 1943, made the cooperation official and added a military component.[71] This agreement shaped

technical cooperation as well as the sharing of information and ideas.[72] In addition, the three states agreed not to use the bomb against one another or to provide information to a third entity without the consent of the other two.[73] As for the bilateral US-UK relationship, which is my focus here, an interesting fact is that the British authorities were asked to approve the use of nuclear weapons on Hiroshima before the bombing took place.[74] It is true that the US Congress did pass the Atomic Energy Act, also known as the McMahon Act, in August 1946, and it put an end to the exchange of information related to nuclear weapons among the three parties of the Québec Agreement. However, there was room for restored cooperation in 1948, when the British committed to provide uranium to the United States if it offered nuclear assistance in return.[75] This was difficult in the late 1940s and early 1950s because of the scandals of espionage involving British scientists and high-level diplomats.[76] However, the alliance remained and the 1946 Spaatz-Tedder Agreement had since authorized the United States to use British air bases in peacetime.[77] In August 1948, after the Berlin blockade, the first US bombers able to reach the Soviet Union were deployed in the United Kingdom. In September, the chief of the US Air Force, General Norstad, informed the British allies that a group of B-29 bombers would be stationed in the United Kingdom permanently from this moment on.[78] So post–World War II tensions should not hide the depth of the alliance between the United States and the United Kingdom, which included a military dimension that was built and consolidated before the creation of NATO.

Second, this military alliance could be perceived as based on a positive nuclear security guarantee before the United Kingdom decided to test a nuclear device. It is true that President Truman did not allow the deployment of nuclear weapons abroad before April 1951.[79] The bombers previously deployed in the United Kingdom were able to carry and deliver nuclear weapons, but they were originally deployed without those weapons. However, the cooperation between the Royal Air Force and the US Air Force increased to such an extent that the British were convinced a positive nuclear security guarantee did exist.[80] Prime Minister Attlee was also convinced that the United States would consult him before using the nuclear weapons stationed in the United Kingdom, and this conviction is based on no official written document.[81] From the summer of 1956, the V-bomber force, which was able to carry fission bombs, entered service. From that moment on, the United States has shared part of its strategic planning with the United Kingdom.[82] After a period of tension following the Suez crisis, detailed agreements were signed in 1957–1958 between the Strategic Air Command and its British counterpart.[83] So the presence of US nuclear weapons on British soil, the cooperation

between both the British and US air forces, and the personal convictions of Prime Minister Attlee suggest that an implicit nuclear security guarantee was perceived to be in place. The British conviction that the United States was ready to extend its nuclear deterrent to the United Kingdom was therefore in existence from the end of the 1940s.[84]

Third, in spite of this military alliance and the shared perception that it included a positive nuclear security guarantee, on January 8, 1947, Attlee decided that his country had to build an independent nuclear deterrent, and the additional guarantees given after that date did not change the course of British nuclear history.[85] The 1957 and 1958 White Papers insisted on the independence of the British "deterrent": the first one emphasized that Britain required "an appreciable element of nuclear deterrent power of her own" and that of 1958 proclaimed that Britain's nuclear force "in itself constitutes a formidable deterrent."[86] In spite of the strength of the ties between the two countries and the British project to include the national deterrent in a "deterrence in concert" with the United States, not only did the US positive nuclear security guarantee never convince the British to give up their weapons but plans for the use of nuclear weapons on a strictly national basis were elaborated in parallel in case the NATO security guarantee was withdrawn.[87]

Finally, the variant of the nuclear straitjacket tested here does not grasp the thinking of the British decision makers. The causes of the 1947 decision have almost nothing to do with US extended nuclear deterrence. Rationales focused on possessing an independent capability in case of a conflict; restarting a nuclear effort in order to restore the nuclear cooperation with the United States, which had stopped in 1946; and an "instinctive" desire to possess the newest weapons.[88]

Even if one superimposes the nuclear straitjacket onto decision making at the time, it becomes clear that it never really convinced because the nuclear alternative to an independent nuclear weapons system was not believed to be credible enough. The existing scholarship on British nuclear history shows that doubts about the credibility of the US nuclear security guarantee emerged among the chiefs of staff as early as 1957–1958, with the debate on "nuclear sufficiency."[89] But one can find traces of those doubts even earlier. In the very early 1950s, the British chief of staff subcommittee on air defense already anticipated the coming vulnerability of American cities and its impact on the credibility of the extended deterrence pledge: "Retaliation does not provide a global defence, it can only defend those places that are completely integrated politically. When New York is vulnerable to attack the United States will not use her strategic weapon in defence of London. The United Kingdom must, therefore, have its own retaliatory defence. Similarly,

however, we will not be prepared to sacrifice the United Kingdom in the defence of say Darwin, and eventually each political unit must have its own means of retaliation."[90]

Other rationales were developed afterward, and they still remained incompatible with the variant of the nuclear straitjacket tested here. On March 1, 1955, for instance, Churchill made a military case for British nuclear weapons as capable of hitting targets of relevance that US weapons might not give adequate priority to.[91] More generally, since the Global Strategy Paper of June 1952, the alternative to an independent nuclear deterrent was not the US positive security guarantee but the development of conventional forces.[92] In spite of the effect of the Korean War, which created an incentive for conventional rearmament, the long-term trend of British military planning consisted of decreasing military spending and increasing reliance on the US security guarantee.[93] This reasoning, shared by the Labour and Conservative parties, never included the possibility of giving up an independent deterrent.[94] Instead, it was perceived both as a way to save money on conventional military spending and as a power multiplier when combined with the US security guarantee.[95]

So British nuclear history appears as a strong anomaly for the variant of the nuclear straitjacket tested here. The independent national deterrent and the positive security guarantee from the ally, both of which were nuclear, became combined in British thinking. The same can be said for France.[96]

France

France is a founding member of the Atlantic Alliance in 1949 and of the associated organization the year after. As such, it benefitted from the implicit positive nuclear security guarantee that protects all the members. American and Canadian bases as well as the Supreme Headquarters of Allied Powers Europe were even installed on French soil.[97] However, France did test its first A-bomb in the Reggane Desert in Algeria in February 1960, and its nuclear capability became fully operational in October 1964 when the Mirage IV bombers entered service.[98] France then tested its H-bomb in August 1968.[99] For reasons explained above, though, the analysis presented here will not cover the period after 1958.

I previously showed that the US authorities approached the French case with the nuclear straitjacket logic in the late 1950s. However, France is another strong anomaly for the variant of the nuclear straitjacket tested here, even though it is sometimes neglected because of the misleading identification of the French nuclear program with the personality of Charles de Gaulle.

It is true that the degradation of the relationship between France and NATO as well as the acceleration of the French nuclear weapons program coincided with de Gaulle returning to power in May 1958. Indeed, the room for negotiation between France and NATO somewhat disappeared in 1959 when de Gaulle warned Germany and the United States that France intended to withdraw from the Alliance's operational structure after the settlement of the Algerian crisis or the US presidential elections.[100] And on March 17 of this same year, the defense council gave the nuclear weapons program (known as the *force de frappe*) "absolute priority."[101] However, interpreting this simultaneity is not as easy as it seems and should not reconcile the French case with the nuclear straitjacket or with the idea that a positive nuclear security guarantee could be sufficient for states to give up nuclear weapons ambitions.

First, the acceleration of the program or the change in the level of priority does not mean that there was no previous desire to acquire these weapons. Such an assessment would neglect the decisive roles of Pierre Mendès-France and Félix Gaillard in advancing the program, an attempt at cooperating with Italy and Germany, as well as fund transfers from the defense budget to the Atomic Energy Commission before de Gaulle returned.

As early as 1954, Prime Minister Pierre Mendès-France authorized significant progress in the militarization of the program.[102] On October 26, he signed a secret decree that created a superior commission for military applications of atomic energy as well as a committee dedicated to nuclear explosives. The commission never met, but the committee did begin working in secret as soon as it was created on November 4, 1954.[103] On December 26, Mendès-France, president of the Council of Ministers, also participated in a meeting at the Foreign Ministry during which some analysts believe the final decision to build the bomb was made.[104] On December 29, the *Commissariat à l'Énergie Atomique* (CEA; Atomic Energy Commission) created the *Bureau d'Études Générales* (Office of General Studies), which would later become the *Direction des Applications Militaires* (Direction of Military Applications).[105] A few days later, Mendès-France reconsidered the decision of December 26 and only wanted to leave the option open. Afterward, he always tried to underplay his role in French nuclear history.[106]

Beyond the personal role of Pierre Mendès-France and of the institutions that were created during his time in office, signs of a persistent will to develop an independent nuclear weapons capability can be traced back to the period between the fall of the Mendès-France cabinet and the return of de Gaulle. Major money transfers to fund the weapons program took place during that period.[107] On May 20, 1955, the minister in charge of atomic energy, Gaston Palewski, signed a secret protocol with his counterparts in the

ministries of National Defense and Finance to fund the activities of the CEA for the period 1955–1957. The protocol stated that 20 billion francs would be transferred from the French defense budget to fund the activities of the CEA, including the building of a nuclear-powered ship and technical studies. It included reciprocal measures suggesting that the sections of the three armies dedicated to nuclear issues could also receive money to fund activities in which both the CEA and the Ministry of Defense considered they would best perform. This possibility to transfer funding to the armies would prove crucial at the time of testing because that phase was delegated to them.[108] Physicist and chief scientist at the CEA Yves Rocard claims that around 1957, 100 billion francs were transferred from the defense budget to the CEA to fund all the military experiments except testing.[109] And in the defense budget for 1957, 37 billion francs were allocated to studies and prototypes of a nuclear-capable aircraft, which was at the time considered the most promising delivery vehicle for a nuclear payload to reach a target beyond the Iron Curtain.[110]

Beyond secret money transfers and financial provisions, parliamentarians started acting explicitly in favor of a military program, even before the Suez crisis. For instance, within the context of the Euratom debate, eight French senators feared that treaty commitments might impose restrictions on the development of an independent nuclear force. So, on April 17, 1956, they tabled a bill proposing a modification of the 1945 order (*ordonnance*) giving birth to the Atomic Energy Commission to create a military division within it.[111]

The attitude of the French representatives during the negotiations of the 1957 Euratom Treaty and vis-à-vis their European partners is also very telling of their military ambitions. They lobbied for the construction of power plants fueled by natural uranium *as well as* a European enrichment plant. They did not seem to want to use the enriched uranium as fuel, so the logical explanation for the French position is that the enriched uranium would be used to build weapons.[112] As Colonel Charles Ailleret, commander of "special weapons" in charge of organizing the first French nuclear test, remembers, "by January 1, 1957, one could consider that the practical decision to build and detonate the national atomic bomb was made and that the means to start the operations to this end were already at the disposal of the authorities."[113] In 1957 and 1958, the French authorities went so far as to sign a bilateral agreement with Germany and multiple trilateral agreements with Germany and Italy for future cooperation regarding the Pierrelate uranium enrichment plant as well as nuclear-weapons-related cooperation. Even if several aspects of this story remain unclear, the French drive for cooperation to

speed up the national nuclear weapons program, and its desire to keep it secret from the United Kingdom and the United States and to make sure that it would benefit from it are yet other clues of a nuclear weapons project that is meant to be independent from the United States and, as such, incompatible with the variant of the nuclear straitjacket tested here.[114] Most important, in April 1958, former Prime Minister Felix Gaillard made the decision to test a nuclear device at the beginning of 1960 and antedated the document to April 11, before the fall of his government.[115] De Gaulle only confirmed it. Even before the strongest moments of the crisis between NATO and France that would coincide with the return of de Gaulle and the increasing level of priority given to the nuclear weapons program, Pierre Mendès-France's role, several money transfers, creations of institutions, and Felix Gaillard's decision to authorize the testing of a device show that the drive toward nuclear weapons in France predates de Gaulle and the degradation of French relations with NATO.

Third, neither de Gaulle nor Mendès-France ever thought about the independent national deterrent in terms of the nuclear straitjacket.[116] The key problem was not about the credibility of the nuclear security guarantee; it was about the risk of losing independence. In spite of their ideological differences, Mendès-France and de Gaulle shared this sense that "France's independence had to be defended against the United States."[117] The same could be said for Defense Minister Jacques Chaban-Delmas.[118] US nuclear weapons could be accepted as possibly strengthening the Alliance and saving some money, but they could not be an alternative to an independent national deterrent. Several explicit statements were made to that effect. On January 24, 1958, French minister of national defense Jacques Chaban-Delmas told *Le Monde* that "it is impossible for France to give up the bomb. . . . It would give up its rank of world power."[119] De Gaulle was as explicit in his interview with Dulles in June 1958 when he told him "this is why we will not refuse your weapons."[120] It is true that France perceived a threat from the Soviet Union and was afraid of the prospect of Germany rearming. The Soviet threat helps to understand why France participated in NATO and the Union of Western Europe; the German threat accounts for the rhythm of the national program as well as the support from Mendès-France.[121] However, nuclear weapons appeared above all as instruments of independence and prestige, and the nuclear straitjacket does not approach them as such. Under the Fourth Republic, they were supposed to strengthen the French voice in NATO and the Union of Western Europe. The period following the Suez crisis of October 1956 radicalized this approach and made the nuclear weapons program an instrument to affirm the independence of France from the NATO Allies as well as

from any other power. De Gaulle, who showed little interest in the subtleties of nuclear deterrence, personified this understanding of the purpose of the French nuclear program after he returned to power.[122]

The memory of the Suez crisis should be reinterpreted along this line. The nuclear straitjacket reads the crisis as a sign that the United States was not an unconditional ally, which decreased the credibility of its positive nuclear security guarantee and therefore created an additional incentive to go for the bomb. Instead, Dominique Mongin convincingly shows that Suez was a step toward the officialization of a policy rather than a window of opportunity for change at the level of policymakers; it was only decisive vis-à-vis the public opinion.[123] Once you take into account the primacy of the quest for independence, the crisis reveals that "the security of France is entirely dependent on the American alliance."[124] Indeed, the integrated command between the French and the British in the operation *Mousquetaire* proved to be a total failure. It deprived both parties of the ability to take initiatives at critical moments and ended up with the British yielding to US demands to withdraw troops from Egypt.[125] Therefore, the reasoning went, in the name of national independence, a national nuclear deterrent had to be built. Even the reasons for the crisis with NATO at the beginning of the de Gaulle era, which are often presented as supporting the nuclear straitjacket, point to this fundamental driver. The heart of the crisis was that de Gaulle wanted the French to control the US weapons stationed on their soil. This demand eventually led to the withdrawal of the French Mediterranean fleet from NATO integrated command and the expulsion of US nuclear forces on French soil.[126]

In sum, a careful reading of French nuclear history shows that the nuclear straitjacket was not successful as a policy and was so far away from the mind-set of the leaders that it did not provide much leverage.[127] This critique of the nuclear straitjacket is all the stronger in cases having strong relationships with a protector whose territory is not yet vulnerable to a massive nuclear retaliation, in a world of few potentially hostile nuclear weapons states. In such circumstances, the promise of extended nuclear deterrence should therefore be as credible as possible so the hypothesis of the nuclear straitjacket should be easier to confirm. Instead, both the British and the French cases indicate that a positive nuclear security guarantee is not a sufficient condition for all states to give up nuclear weapons and, most important, that the nuclear straitjacket does not capture adequately the options available at the time to the leaders. For French and British leaders, the decision to go nuclear was not a matter of extended nuclear deterrence or of its degree of credibility.

Conclusion

The behavior of two of the closest allies of the United States, the United Kingdom and France, shows that extended nuclear deterrence did not prevent them from developing their own national nuclear arsenals. This was the case in a world composed of only a few potentially hostile nuclear-armed states against which the protector would have had to act, a world in which the tradition of nonuse was still in its early years and, most important, a world where their protector was not yet vulnerable to a massive nuclear retaliatory strike. Since the European allies were not convinced of the higher credibility of alternatives to massive retaliation, the pre-1958 context made the US pledge of nuclear retaliation in case of an attack against a protégé as credible as it ever was. In spite of those conditions, which are particularly favorable to the variant of the nuclear straitjacket tested here, the British and French cases remain anomalies and developed their own nuclear arsenals.

The British and the French cases also illustrate the ways in which the nuclear straitjacket mischaracterizes the set of policy options available to decision-making elites. Nuclear-weapons-related choices are not only dependent on a subjective measurement of the credibility of a pledge based on nuclear weapons capabilities, which is why this critique should not be misinterpreted as a case for the inevitability of proliferation. On the contrary, the number of non-nuclear-weapons states whose security strategies do not depend on an extended nuclear deterrent underlines the widespread existence of a non-nuclear understanding of security that is also incompatible with the nuclear straitjacket. Indeed, a number of states that have tried to acquire nuclear weapons systems for a long time or have managed to acquire them after a long and costly effort have given up without receiving a pledge of extended nuclear deterrence.[128] For instance, in the post-Soviet states, during the negotiations that would lead to the renunciation, the strongest emphasis was laid on the independence of the state and the respect of its sovereignty, separate from the nuclear instrument.[129] Similarly, Libya put an end to an effort of more than thirty years, and South Africa dismantled its nuclear arsenal and neither received anything close to an extended nuclear deterrence pledge.

This has important implications for historians, analysts, and policymakers: The belief in the nuclear straitjacket as a principle working throughout nuclear history creates an overestimation of the role of extended deterrence, of the need to make the pledge credible, and of the successes of past policies based on it. More broadly, neglecting a political approach of nuclear choices—which gives room for the possibility of radical peaceful change over time

and accepts the possibility of a non-nuclear understanding of security—could lead to misguided policies. As I have shown in the case of the nuclear straitjacket, rigid and structural approaches unduly oppose renunciation of nuclear weapons on the part of the protector, the reduction of its arsenal beyond a given size, and consequently the feasibility and desirability of a world without nuclear weapons. Most important, they induce policymakers to continue a nonproliferation policy based on a partial understanding of nuclear history and discourage policy innovation outside the proliferation paradigm.[130]

Notes

1. See Hans Kristensen's chapter in this book.

2. For a more complete analysis of the "nuclear straitjacket," see Benoit Pelopidas, "A bet portrayed as a certainty" in *The War that Must Never be Fought*., eds. George P. Shultz and James E. Goodby (Stanford, CA: Hoover Press, 2015).

3. Nuclear security guarantees are usually presented as positive or negative, depending on the kind of action expected from the actor offering them. The provider of positive security guarantees commits itself to act in a certain way to protect the beneficiary of the guarantees; the provider of negative security guarantees commits itself not to act in a given fashion, in this case, not to use or threaten to use nuclear weapons against the other party. What matters for my argument here is that negative security guarantees only limit the nuclear threats coming from *one* actor, whereas positive security guarantees can cover actions against *several* sets of threats coming from different actors.

4. I am aware of the fact that resolutions 255 and 984 of the United Nations Security Council, passed on June 19, 1968, and April 11, 1995, respectively, also include security guarantees that are said to be positive. I do not include them because they take effect after a nuclear strike only, and are indirect, conditional, and very limited. The relevant part of the resolution 984 reads as follows: "in case of aggression with nuclear weapons or the threat of such aggression against a non-nuclear-weapon State Party to the Treaty on the Nonproliferation of Nuclear Weapons, any State may bring the matter immediately to the attention of the Security Council to enable the Council to take urgent action to provide assistance, in accordance with the Charter, to the State victim of an act of, or object of a threat of, such aggression; and recognizes also that the nuclear-weapon State permanent members of the Security Council will bring the matter immediately to the attention of the Council and seek Council action to provide, in accordance with the Charter, the necessary assistance to the State victim."

5. I borrow the categories from Paul K. Huth, "Extended Deterrence and the Outbreak of War," *American Political Science Review* 82, no. 2 (June 1988): 423–43.

6. On the importance and policy implications of this notion, see Benoit Pelopidas, "Renunciation: Restraint, Reversal and Rollback" in *Routledge Handbook of Nuclear Proliferation and Policy*, ed. Joseph Pilat and Nathan Busch (London: Routledge, 2015).

7. For a complete treatment of the issue of the nuclear straitjacket, see Pelopidas, "A bet portrayed as a certainty": 30–39 and Benoit Pelopidas, *Renoncer à l'arme nucleaire: La seduction de l'impossible?* (Paris: Presses de Sciences Po, forthcoming).

8. Jeffrey Knopf's recent edited volume offers a welcome counterpoint in which he makes explicit that assurances are not a "silver bullet" and that their impact on nuclear weapons acquisition is "modest" rather than "decisive." See Jeffrey W. Knopf, "Introduction," in *Security Assurances and Nuclear Proliferation*, ed. Jeffrey W. Knopf (Stanford, CA: Stanford University Press, 2012), 6.

9. See John Mearsheimer, "Back to the Future: Instability in Europe after the Cold War," *International Security* 15, no. 1 (Summer 1990): 5–56; John Mearsheimer, "The Case for a Ukrainian Nuclear Deterrent," *Foreign Affairs* 72, no. 3 (Summer 1993): 50–66; Benjamin Frankel, "An Anxious Decade: Nuclear Proliferation in the 1990s," *Journal of Strategic Studies* 13, no.3 (September 1990): 1–13; Benjamin Frankel, "The Brooding Shadow: Systemic Incentives and Nuclear Weapons Proliferation," in *The Proliferation Puzzle: Why Nuclear Weapons Spread (and What Results)*, ed. Zachary Davis and Benjamin Frankel (London: Frank Cass, 1993); Steven Van Evera, "Primed for Peace: Europe after the Cold War," *International Security* 15, no. 3 (Winter 1990–1991): 7–57. Kenneth Waltz did reply that a general theory of international politics like structural realism cannot predict proliferation. See Kenneth Waltz, "A Reply," *Security Studies* 4, no. 4 (1995): 803. For a detailed critique of the evolution and inconsistency in Waltz's discourse on nuclear weapons, see Daniel Deudney, "Dividing Realism: Structural Realism and Security Materialism on Nuclear Security and Proliferation," *Security Studies* 2, no. 3/4 (1993): 5–36.

10. Frankel, "An Anxious Decade," 6–7.

11. Michael C. Horowitz, "Nuclear Power and Militarized Conflict," in *The Nuclear Renaissance and International Security*, ed. Adam Stulberg and Matthew Fuhrmann (Stanford, CA: Stanford University Press, 2013), 308–09.

12. Mearsheimer, "The Case for a Ukrainian Nuclear Deterrent."

13. Fiona Hill and Pamela Jewett, *Back in the USSR: Russia's Intervention in the Internal Affairs of the Former Soviet Republics and the Implications for United States Policy Toward Russia*, Occasional Paper, Strengthening Democratic Institutions Project, Belfer Center for Science and International Affairs, Harvard University, John F. Kennedy School of Government, Cambridge, MA, 1994, 89.

14. Yair Evron, *Israel's Nuclear Dilemma* (Ithaca, NY: Cornell University Press, 1994), ix and chapter IV.

15. For a very prudent statement along this line, see David Yost, *The U.S. and Nuclear Deterrence in Europe*, Adelphi Paper no. 326 (Oxford: Oxford University Press, 1999), 25–27. See also the works by Bruno Tertrais, "Nuclear Proliferation in Europe: Could It Still Happen?" *Nonproliferation Review* 13 no.3 (November 2006): 570. One has to recognize, however, that Tertrais' argument is slightly different. He tends to explain the absence of nuclear proliferation in Europe with the US nuclear security guarantee. However, on the one hand, he considers all the cases of nuclear temptations and not only the successful ones, which tends to give the nuclear security guarantee a role that goes beyond what the nuclear straitjacket assumes. On the other hand, the progress of the European construction is part of the explanation he provides. Along the same lines and more recently, he considers that the removal of the US extended nuclear deterrence would increase the Saudis' incentive to develop their

own nuclear weapons. Bruno Tertrais, "The Illogic of Zero," *The Washington Quarterly* 33, no. 2 (April 2010): 130–31.

16. Andrew B. Kennedy, "India's Nuclear Odyssey: Implicit Umbrellas, Diplomatic Disappointments and the Bomb," *International Security* 36, no. 2 (Fall 2011): 120–53. One has to note that the argument about "implicit nuclear umbrellas" was strongly criticized, emphasizing the key problem of credibility to which I will return. See Gaurav Kampani, Karthika Sasikumar, Jason Stone, and Andrew B. Kennedy, "Correspondence: Debating India's Pathway to Nuclearization," *International Security* 36, no. 2 (Fall 2012): 183–96, in particular 183, 185–91.

17. Glenn Chafetz, "The End of the Cold War and the Future of Nuclear Proliferation: An Alternative to the Neorealist Perspective," *Security Studies* 2, no. 3/4 (1993): 136.

18. This line of argument can be found among the opponents to a US shift to no first use of nuclear weapons. They say that the mere decrease of the credibility of the pledge of extended deterrence, let alone the removal of the pledge, would be enough to increase greatly the probability of proliferation. Tertrais expresses it very clearly when he writes, "If allies covered by the US nuclear umbrella saw such a policy shift as a reduction in the value of American protection, they could conclude that they should embark in their own nuclear programmes." Bruno Tertrais, "The Trouble with No First Use," *Survival* 51, no. 5 (October–November 2009): 25.

19. Francis Gavin, "Same as It Ever Was: Nuclear Alarmism, Proliferation and the Cold War," *International Security* 34, no. 3 (Winter 2009–2010), 27, 28, 34.

20. Eric Edelman, Andrew Krepinevich, and Evan Braden Montgomery, "The Dangers of a Nuclear Iran," *Foreign Affairs* 90 no. 1, (January/February 2011): 70–71 and James A. Russell, "Nuclear Proliferation and the Middle East's Security Dilemma: The Case of Saudi Arabia" in *Over the Horizon Proliferation Threat*, ed. James J. Wirtz and Peter Lavoy (Stanford, CA: Stanford University Press, 2012).

21. This figure is based on the latest numbers published by the Ploughshares Fund. They are available at http://ploughshares.org/world-nuclear-stockpile-report.

22. Alexei Arbatov translated the 2000 Russian Military Doctrine into English, "The Transformation of Russian Military Doctrine: Lessons Learned from Kosovo and Chechnya," German Center 2000, appendix A, 36–37.http://www.marshallcenter.org/mcpublicweb/MCDocs/files/College/F_Publications/mcPapers/mc-paper_2-en.pdf

23. Nikolaï Sokov, "The New 2010 Russian Military Doctrine: The Nuclear Angle," http://cns.miis.edu/stories/100205_russian_nuclear_doctrine.htm and Pavel Podvig, "New Version of the Military Doctrine", *Russian Strategic Nuclear Forces Blog*, December 26, 2014, http://russianforces.org/blog/2014/12/new_version_of_the_military_do.shtml.

24. On the commitments under the Tashkent treaty, interview with Nikolai Sokov, Monterey, California, March 19, 2010.

25. Sokov describes three main roles for these weapons in contemporary Russia: status symbol, existential deterrence in case of an attack from NATO forces, and deterrence of a conventional attack. Nikolai Sokov, "The Evolving Role of Nuclear Weapons in Russia's Security Policy" in *Engaging China and Russia in Nuclear Disarmament*, ed. Cristina Hansell and William Potter, Occasional Paper no. 15, James Martin Center for Nonproliferation Studies, Monterey, April 2009, 73–76. See also

Pavel Podvig, "Instrumental Influences: Russia and the 2010 Nuclear Posture Review," *Nonproliferation Review* 18, no. 1 (March 2011): 46–48. Those analyses still apply to the 2014 military doctrine since the nuclear paragraph is unchanged, as shown by Pavel Podvig in "New Version of the Military Doctrine." Jeffrey Lewis seems to follow a comparable line of argument when he writes that extended deterrence is "essentially an American phenomenon." Jeffrey Lewis, "From Extended Deterrence to Core Deterrence," *The Interpreter*, February 18, 2011, http://www.lowyinterpreter.org/post/2011/02/18/The-myth-of-the-nuclear-umbrella.aspx.

26. Translated and quoted in *Défense et sécurité nationale: le livre blanc* (Paris: Odile Jacob, 2008), 110. The 2013 White Book on Defence and National Security maintains a similar stance. See http://www.gouvernement.fr/sites/default/files/fichiers_joints/livre-blanc-sur-la-defense-et-la-securite-nationale_2013.pdf, 62. The original document can be retrieved at http://www.nato.int/docu/basictxt/b740619a.htm.

27. *Défense et sécurité nationale: le livre blanc* (2008), 110.

28. *Défense et sécurité nationale: le livre blanc* (2008), 170. Author's translation.

29. The European allies that are also members of NATO do not wish to depend on a French or British nuclear guarantee, and both Sweden and Finland, members of the EU but not of NATO, want to delegitimize nuclear weapons in Europe. See David Yost, "Assurance and U.S. Extended Deterrence in NATO," *International Affairs* 85 no. 4 (July 2009): 761–62; Ursulla Jasper and Clara Portela, "E.U. Defense Integration and Nuclear Weapons: A Common Deterrent for Europe?" *Security Dialogue* 41, no. 2 (April 2010): 159–62.

30. See Isabelle Lasserre, "Moyen-Orient: la France se donne les moyens de riposter," *Le Figaro*, June 16, 2009; Régis Soubrouillard, "La France, parapluie nucléaire des Emirats Arabes Unis?," *Marianne 2*, June 17, 2009; Benoît Pelopidas, "French Nuclear Idiosyncrasy: How It Affects French Nuclear Policies Towards the United Arab Emirates and Iran," *Cambridge Review of International Affairs* 25 no. 1 (March 2012): 143–69.

31. The British 2008 National Security Strategy does not mention the notion of extended deterrence but only that of an "independent deterrent." Cabinet of the Prime Minister, *The National Security Strategy of the United Kingdom: Security in an Interdependent World* (London: Crown, 2008), 31, 44. William Walker confirms that "the U.K. does not practice extended deterrence on a bilateral basis. No other state shelters, formally at least, under a British nuclear umbrella." William Walker, "The U.K., Threshold Status and Responsible Nuclear Sovereignty," *International Affairs* 81 no. 2 (April 2010): 6.

32. On the Israeli relationship with its nuclear arsenal, see Avner Cohen, *The Worst-Kept Secret: Israel's Bargain with the Bomb* (New York: Columbia University Press, 2010).

33. I am aware of the debates about the modernization of Chinese nuclear forces, which might lead to a shift away from minimum deterrence. For the purpose of this argument, one has to recognize that the jury is still out on the issue and that the debate never really mentions the possibility that China will offer extended deterrence. See Jeffrey Lewis, "Minimum Deterrence," *Bulletin of the Atomic Scientists* (July–August 2008), http://www.newamerica.net/publications/articles/2008/minimum_deterrence_7552.

34. See "Recommendations for Achieving the Objective of Nuclear Disarmament and Nonproliferation of Nuclear Weapons," working paper submitted by China,

Disarmament Commission, United Nations, 2006 substantive session, April 10–28, 2006, A.CN.10/2006/WG.I/WP.3. See, more broadly, Jeffrey Lewis, "Chinese Nuclear Posture and Modernisation" in *Engaging China and Russia in Nuclear Disarmament*, ed. Cristina Hansell and William Potter, Occasional Paper no. 15, James Martin Center for Nonproliferation Studies, Monterey, California, April 2009, 40, 51. This remains true in spite of the false rumor spread by the *Washington Times* that Beijing had offered an extended deterrence pledge to Ukraine in January 2014. For a detailed analysis, see Jeffrey Lewis, "A Nuclear Umbrella for Ukraine?" *Arms Control Wonk Blog*, January 16, 2014, http://lewis.armscontrolwonk.com/archive/7019/a-chinese-nuclear-umbrella-for-ukraine.

35. On the case of the United States and the European allies during the Cold War, see Michael Howard, "Reassurance and Deterrence: Western Defense in the 1980s," *Foreign Affairs* 61 no. 2 (Winter 1982–1983): 309–324.

36. Quoted in Thom Shanker and Norimitsu Onishi, "Japan Assures Rice That It Has No Nuclear Intentions," *New York Times*, October 19, 2006, 14. I believe the umbrella analogy is seriously misleading, but this is not the right place to offer this critique in detail.

37. William Mann, "U.S. Reaffirms Promise to Defend South Korea," *Associated Press*, October 21, 2006.

38. Agence France Presse, "Robert Gates: les États-Unis n'accepteront jamais une Corée du Nord dotée de l'arme atomique," October 21, 2009.

39. Scott Sagan, "Shared Responsibilities for Nuclear Disarmament," *Daedalus* 138, no.4 (Fall 2009): 163.

40. Report of the Secretary of Defense Task Force on DOD Nuclear Weapons Management, Phase II: Review of the DOD Nuclear Mission, 2008, iv.

41. Report of the Secretary of Defense, 7.

42. William Perry, James Schlesinger, et al., *America's Strategic Posture: The Final Report of the Congressional Commission on the Strategic Posture of the United States* (Washington, DC: United States Institute for Peace Press, 2009), 8.

43. Timothy Crawford, "The Endurance of Extended Deterrence: Continuity, Change and Complexity in Theory and Policy," in *Complex Deterrence. Strategy in the Global Age*, ed. T. V. Paul, Patrick Morgan, and James Wirtz (Chicago, IL: University of Chicago Press, 2009), 278; Bruno Tertrais, *La France et la dissuasion nucléaire: concept, moyens, avenir* (Paris: La Documentation Française, 2007), 24.

44. William Walker, "Nuclear Order and Disorder," *International Affairs*, 76 no. 4 (October 2000); William Walker, *Weapons of Mass Destruction and International Order*, Adelphi Paper no. 370 (Oxford: Oxford University Press, 2004), chapter 2. See also Henry D. Sokolski (who does not explicitly list extended deterrence as a nonproliferation tool he explores in his book but whose remarks match the nuclear straitjacket perfectly) *Best of Intentions: America's Campaign against Strategic Weapons Proliferation* (London: Praeger, 2001), 5.

45. For an account of the meeting between De Gaulle and Dulles, see Bernard Ledwige, *De Gaulle et les Américains: conversations avec Eisenhower, Kennedy, Rusk, 1958–1964*. (Paris: Flammarion, 1984), 14–33. One should, of course, recognize the diversity of view within the US administration and the fact that in the early 1950s, the Pentagon tended to feel that the acquisition of nuclear weapons by France was inevitable and might even improve US security. See Shane Maddock, *Nuclear Apartheid:*

The American Quest for Nuclear Supremacy from World War II (Chapel Hill: University of North Carolina Press, 2010), 106; Jan Melissen, "Nuclearizing NATO, 1957–1959: The 'Anglo-Saxons,' Nuclear Sharing and the Fourth Country Problem," *Review of International Studies* 20, no. 3 (July 1994): 271–72.

46. Maurice Vaïsse, "Un dialogue de sourds: les relations nucléaires franco-américaines de 1957 à 1960," *Relations Internationales* 68 (Winter 1991): 421–22; Maurice Vaïsse, "Indépendance et solidarité 1958–1963," in *La France et l'OTAN 1949–1996*, ed. Frédéric Bozo, Maurice Vaïsse, and Pierre Mélandri (Paris: Éditions Complexes, 1996), 231, 233.

47. Perry, Schlesinger, et al., *America's Strategic Posture*, 13, 17, 98, 123.

48. The Obama campaign website is also a valuable source in that regard: http://origin.barackobama.com/issues/foreign_policy/#nuclear.

49. Quoted in Isabelle Lasserre, "Les partisans du Global Zero misent sur Obama," *Le Figaro*, December 8, 2008.

50. US Department of Defense, *Quadriennal Defense Review Report*, Washington, DC (February 2010): 14.

51. Perry, Schlesinger, et al., *America's Strategic Posture*, 15.

52. William Perry, Brent Scowcroft, and Charles Ferguson, *U.S. Nuclear Weapons Policy* (New York: Council on Foreign Relations, 2009), 5. These points are reaffirmed on pages 8, 14–16, 81, and 90–91.

53. Perry, Schlesinger, et al., *America's Strategic Posture*, 13.

54. *Nuclear Posture Review Report*, April 2010, 7, 39.

55. The section I omitted in the previous quote expresses this point: "By maintaining a credible nuclear deterrent, and reinforcing regional security architectures with missile defenses and other conventional military capabilities, we can reassure our non-nuclear allies and partners worldwide of our security commitments to them."

56. David Holloway notes this lack of historical analysis of the role of extended nuclear deterrence in what he calls "the proliferation objection" to a world without nuclear weapons in "Deterrence and Enforcement in a World Free of Nuclear Weapons," in *Deterrence: Its Past and Future*, ed. George P. Shultz, Sidney D. Drell, and James E. Goodby (Stanford, CA: Hoover Institution Press, 2011), 353, footnote 19.

57. The other side of the problem, that is, extended nuclear deterrence being a necessary condition for nonproliferation, is considered in Pelopidas, *Renoncer a l'arme nucleaire*, chapter 4. In the deterrence theory literature, the problem has been addressed in terms of passivity of the protégé. Alexander George and Richard Smoke showed that the protégé is not passive in the relationship of extended deterrence. It can manipulate the pledge it has received, creating a classical problem of moral hazard. Alexander George and Richard Smoke, *Deterrence in American Foreign Policy: Theory and Practice* (New York: Columbia University Press, 1974), 370. This problem can explain why a positive security guarantee is not a sufficient condition for renunciation of nuclear weapons.

58. Given that the Warsaw Pact was a military alliance, the fact that it included a nuclear security guarantee was implicit but well known. Interview with Nikolaï Sokov, Monterey, California, 13 November 2009.

59. Deterrence theory recognizes that nuclear threats suffer from a major credibility problem, which is all the more important in the case of extended deterrence because the vital interests of the nation expected to retaliate with nuclear weapons

are not directly at stake. For an overview, see Crawford, "The Endurance of Extended Deterrence." During the May 17, 1956, meeting of the US National Security Council, President Eisenhower offered an exemplary statement of this problem. He said, "[I]n the defense of the United States itself we will certainly use nuclear weapons, but to use them in other situations will prove very difficult." *Foreign Relations of the United States 1955–1957*, vol. XIX, National Security Policy, document 79.

60. It is worth keeping in mind that first tests of Soviet ICBMs were not successful and the first of those missiles, an SS-6, actually became operational in early 1960. Even by the end of 1960, the Soviet Union had only two ICBMs. It is true that from 1956 onward, the Tu 95 (Bison) and 3M (Bear) strategic bombers were able to reach US territory and deliver nuclear weapons there, and by the end of 1959, the Soviet Union possessed 105 intercontinental bombers able to deliver 310 bombs. However, given the time it would take for those bombers to reach their target and the possibility to shoot them down, the American homeland was not vulnerable to a massive nuclear strike before at least 1959. See Natural Resources Defense Council, "Table of Soviet/Russian ICBM Forces," http://www.nrdc.org/nuclear/nudb/datab4.asp; Natural Resources Defense Council, "Table of USSR/Russian Strategic Bomber Forces," http://www.nrdc.org/nuclear/nudb/datab8.asp#fiftysix; and "Soviet and Russian Strategic Nuclear Forces," in *Russian Strategic Nuclear Forces*, ed. Pavel Podvig (Boston, MA: MIT Press, 2001), 4–5; and Georges Le Guelte, *Les armes nucléaires: mythes et réalités* (Arles: Actes Sud, 2009), 95–99.

61. Those concerns appear in the report by James Killian submitted in March 1955. The report recognized the shortage of good intelligence on Soviet intentions and capabilities but still offered estimates that the US nuclear superiority in megaton weapons would end as early as 1956. Michael Goodman, *Spying on the Nuclear Bear: Anglo-American Intelligence on the Soviet Bomb* (Stanford, CA: Stanford University Press, 2007), 194.

62. In a 2009 preface to his 1960 book *Stratégie de l'âge nucléaire*, Pierre Gallois claims that, as early as February 1956, he asked generals Montgomery and Norstad what would happen once the United States loses its "quasi-invulnerability" granted by two oceans. The loss of this invulnerability was, in 1956, still a problem for the future in his mind. In the book itself, written in 1959–1960, Gallois does note that in August 1957, the Soviet Union launched long-range (more than 10,000-kilometer) intercontinental ballistic missiles. Pierre-Marie Gallois, *Stratégie de l'âge nucléaire* (Paris: François-Xavier de Guibert, 2009), 12, 41. In his memoirs, *Le sablier du siècle*, he recounts how his interrogations were met with denials at the time at the French Ministry of Defense. Pierre-Marie Gallois, *Le sablier du siècle* (Lausanne: L'Âge d'Homme, 1999), 358. In 1973, when he published *La République impériale*, Raymond Aron reaches the exact same diagnosis: At least until 1956, the US homeland remains almost invulnerable. Raymond Aron, *La République impériale: les États-Unis dans le monde* (Paris: Calmann-Levy, 1973), 86. In his memoirs, Jacques Chaban-Delmas, who was Félix Gaillard's minister of national defense and a strong proponent of an independent nuclear force, claims that he told Eisenhower in Paris in 1952 that the Soviets would not possess the delivery vehicles capable of reaching the United States before two to four years. Jacques Chaban-Delmas, *Mémoires pour demain* (Paris: Flammarion, 1997), 216.

63. Georges-Henri Soutou, "Les accords de 1957 et 1958: vers une communauté stratégique nucléaire entre la France, l'Allemagne et l'Italie?," *Matériaux pour l'histoire de notre temps*, no. 31 (1993): 6.

64. Huw Dylan, "Britain and the Missile Gap: British Estimates on the Soviet Ballistic Missile Threat, 1957–61," *Intelligence and National Security* 23, no. 6 (December 2008): 784–86.

65. Goodman, *Spying on the Nuclear Bear*, 215. On the British intelligence on Soviet nuclear capabilities, see 189–98.

66. Raymond Aron, *Les dernieres annees du siècle*, Paris: Calmann-Levy, 1984: 67. (My translation).

67. Ian Clark writes perceptively that "the launch of *Sputnik*, and development of associated ICBM technology, potentially neutralized the effectiveness of American nuclear guarantee to its allies." Ian Clark, *Nuclear Diplomacy and the Special Relationship*: *Britain's Deterrent and America 1957–1962* (Oxford: Clarendon Press, 1994), 2.

68. If this chapter had been about the Soviet Union as a protector, China would have been the anomaly for the variant of the nuclear straitjacket argument tested here because it acquired nuclear weapons in spite of its 1950 agreement with the Soviet Union.

69. Alan Carr, "How It All Began: The Atomic Bomb and the British Mission," in *U.S.-U.K. Nuclear Cooperation after 50 Years*, ed. Jenifer Mackby and Paul Cornish (Washington, DC: Center for Strategic and International Studies, 2008), 24–25. It would not be accurate to say that this collaboration was easy, among equal partners, and deprived of any component of rivalry. Mid-1942 can be identified as the moment when the American team overtook its British counterpart in nuclear research. However, the special relationship started in 1939 and was going beyond the nuclear aspect. See John Baylis, *Anglo-American Defence Relations*, *1939–84: The Special Relationship* (London: Palgrave, 1984).

70. John Simpson and Jenifer Mackby, "The Special Nuclear Relationship: A Historical Chronology," in *U.S.-U.K. Nuclear Cooperation after 50 Years*, ed. Jenifer Mackby and Paul Cornish (Washington, DC: Center for Strategic and International Studies, 2008), 12–15; John Baylis and Kristan Stoddart, "The British Nuclear Experience: The Role of Ideas and Beliefs (part I)," *Diplomacy & Statecraft* 23, no. 2 (2012): 333.

71. The original title of the agreement is: "articles of agreement governing collaboration between the authorities of the United States and the United Kingdom in the matter of Tube Alloys." See Graham Farmelo, *Churchill's Bomb: A Hidden History of Science*, *War and Politics* (London: Faber and Faber, 2013), 240–44.

72. Béatrice Heuser, *NATO*, *Britain*, *France and the FRG: Nuclear Strategies and Forces for Europe 1949–2000*, (London: MacMillan, 1997), 63.

73. Simpson and Mackby, "The Special Nuclear Relationship," 7; Carr, "How It All Began," 26.

74. Jacques Hymans, "Britain and Hiroshima," *Journal of Strategic Studies* 32, no. 5 (October 2009): 769–97.

75. Simpson and Mackby, "The Special Nuclear Relationship," 4; Heuser, *NATO*, *Britain*, *France and the FRG*, 63.

76. At this time, a former communist, John Strachey, was appointed minister of war in the United Kingdom and, in February 1950, Klaus Fuchs, the person in charge

of theoretical physics in the British atomic energy program in Harwell, was identified as a spy working for the Soviet Union. Simpson and Mackby, "The Special Nuclear Relationship," 7; Andrew Brown, "Historic Barriers to Anglo-American Nuclear Cooperation," in *U.S.-U.K. Nuclear Cooperation after 50 Years*, ed. Jenifer Mackby and Paul Cornish (Washington, DC: Center for Strategic and International Studies, 2008), 44–45; Alex Danchev, "In the Back Room: Anglo-American Defense Cooperation," in *British Intelligence, Strategy and the Cold War 1945–1951*, ed. Richard Aldrich (London: Routledge, 1992), 229–30.

77. These bases were not only in the mainland but also in the islands of the British Empire, notably Okinawa in the South Pacific; the area from Cairo to Suez; and, until 1948, the region between Lahore and Karachi. Danchev, "In the Back Room," 225.

78. One has to recognize that the acceptance of those bombers was not without controversy. Lorna Arnold with Katherine Pyne, *Britain and the H-Bomb* (London: Palgrave, 2001), 36.

79. David Holloway, "Nuclear Weapons and the Escalation of the Cold War, 1945–1962," in *The Cambridge History of the Cold War. Volume I: Origins*, ed. Melvyn P. Leffler and Odd Arne Westad (Cambridge: Cambridge University Press, 2010), 381; Simon Ball, "Military Nuclear Relations between the United States and Great Britain under the Terms of the MacMahon Act, 1946–1958," *The History Journal* 38, no. 2 (June 1995): 443. The weapons were deployed in Guam.

80. Ball, "Military Nuclear Relations," 443–45; Simpson and Mackby, "The Special Nuclear Relationship," 15. See also Glen Segell, "Nuclear Delivery Systems Resulting from the MDA" in *U.S.-UK Nuclear Cooperation after 50 Years*, ed. Jenifer Mackby and Paul Cornish (Washington, DC: Center for Strategic and International Studies, 2008), 117–18.

81. Nicholas Wheeler, "The Attlee Government's Nuclear Strategy, 1945–1951," in *Britain and the First Cold War*, ed. Anne Deighton (New York: St Martin's Press, 1990), 138–39.

82. Brown, "Historic Barriers to Anglo-American Nuclear Cooperation," 41.

83. As soon as March 1957, President Eisenhower met with newly elected Prime Minister MacMillan in Bermuda to make sure that the Suez crisis did not damage the Alliance and to conclude an agreement on the transfer of Thor missiles to the United Kingdom. Simpson and Mackby, "The Special Nuclear Relationship," 9.

84. Wheeler, "The Attlee Government's Nuclear Strategy, 1945–1951," 130, argues that the guarantee has been in place since the deployment of the bombers in 1948.

85. See Peter Hennessy, *Cabinets and the Bomb* (Oxford: Oxford University Press, 2007), 55–59; Baylis and Stoddart, "The British Nuclear Experience," 333, 335–336. It is worth noting that when the Center for Nuclear Research was created in Harwell in September 1945, a discussion started about the number of reactors that needed to be built. At that time, the chiefs of staff had not yet submitted their report on the requirements of nuclear weapons. Attlee argued that the relevant number would be decided depending on the number of bombs the government would consider as needed. Wheeler, "The Attlee Government's Nuclear Strategy, 1945–1951," 132, 134. Andrew Brown argues that the United Kingdom acquired nuclear weapons because of the Soviet threat and distrust of the United States, and to keep its great power status. Brown, "Historic Barriers to Anglo-American Nuclear Cooperation," 46.

86. Quoted in Ian Clark and Nicholas J. Wheeler, *The British Origins of Nuclear Strategy 1945–1955* (Oxford: Clarendon Press, 1989), 241.

87. The expression "deterrence in concert" is used by the minister of defense talking to the prime minister on August 12, 1955. Quoted in Kristan Stoddart, "British Nuclear Strategy during the Cold War," in Matthew Grant (ed.), *The British Way in Cold Warfare: Intelligence, Diplomacy and the Bomb* (London: Continuum, 2009). Lawrence Freedman, *The Evolution of Nuclear Strategy*, 2nd ed. (Basingstoke: Macmillan, 1989), 283–330. This only underlines Britain's quest for independence and its postwar fear that the United States might become isolationist again. The US involvement in the 1948 Berlin crisis did not suffice to appease this British fear, and the behavior of the United States in Suez in 1956 only fed into it. Holloway, "Nuclear Weapons and the Escalation of the Cold War, 1945–1962," 389; Beatrice Heuser, *Nuclear Mentalities? Strategies and Beliefs in Britain, France and the FRG* (London: Palgrave, 1998), 32; Heuser, *NATO, Britain, France and the FRG*, 66.

88. This is derived from Margaret Gowing. She wrote about "something fundamentalist and almost instinctive—a feeling that Britain must possess so climacteric a weapon in order to deter an atomically armed enemy, a feeling that Britain as a Great Power must acquire all the major new weapons, a feeling that atomic weapons were a manifestation of the scientific and technological superiority on which Britain's strength, so deficient if measured in sheer numbers of men, must depend." Margaret Gowing, *Independence and Deterrence: Britain and Atomic Energy 1945–1952, Volume 1: Policy Making* (Basingstoke: St. Martin's Press, 1974), 84. Of course, one would need to recognize, following Richard Maguire's analysis, that there are multiple "nuclear cultures" in the United Kingdom. For the purpose of this analysis, I remain focused on the politico-military elites. Richard Maguire, "'Never a Credible Weapon': Nuclear Cultures in British Government during the Era of the H-Bomb," *British Journal of History of Science* 45, no. 4 (December 2012): 519–33. For an argument about how an independent nuclear weapons system was expected to fortify the alliance with the United States, see Nicholas J. Wheeler, "British Nuclear Weapons and Anglo-American Relations 1945–1954," *International Affairs* 62, no. 1 (Winter 1985–1986): 72.

89. See John Baylis, *Ambiguity and Deterrence: British Nuclear Strategy, 1945–1964*, (Oxford: Clarendon Press, 1995), chapter 8.

90. Defe 8/47, COS Air Defence Sub-Committee, Air Defence Working Party, 2 (54) 16, July 14, 1954.

91. "There are also big administrative and industrial targets behind the Iron Curtain, and any effective deterrent policy must have the power to paralyse them all at the outset, or shortly after. There are also the Soviet submarine bases and other naval targets which will need early attention. Unless we make a contribution of our own—that is the point which I am pressing—we cannot be sure that in an emergency the resources of other Powers would be planned exactly as we would wish, or that the targets which would threaten us most would be given what we consider the necessary priority, or the deserved priority, in the first few hours. These targets might be of such cardinal importance that it would really be a matter of life and death for us." March 1, 1955, http://hansard.millbanksystems.com/commons/1955/mar/01/defence#S5CV0537P0_19550301_HOC_281. See also Clark and Wheeler, *The British Origins of Nuclear Strategy, 1945–1955*, 231.

92. Clark and Wheeler, *The British Origins of Nuclear Strategy, 1945–1955*, 239.

93. Stoddart, "British Nuclear Strategy during the Cold War."

94. There was opposition to an "independent deterrent," particularly within the Labour Party, which came close to the nuclear straitjacket when it proposed that Britain would renounce its nuclear weapons if all others, excluding the two superpowers, did the same. But this never became British policy, not even when Harold Wilson, one the critiques of the so-called independent deterrent became prime minister in 1964. David J. Gill, *Britain and the Bomb.* (Stanford, CA: Stanford University Press, 2014), 11, 41, 45, 48; and Peter Hennessy, *Cabinet* (London: Blackwell, 1986), 126.

95. Pelopidas, *Renoncer à l'arme nucleaire*, 277–79. See also Baylis, *Ambiguity and Deterrence*, 405–14; John Baylis and Alan Macmillan, "The British Global Strategy Paper of 1952," *Journal of Strategic Studies* 16, no. 2 (June 1993): 200–26; Holloway, "Nuclear Weapons and the Escalation of the Cold War, 1945–1962," 385; Heuser, *Nuclear Mentalities?*, 50–51; Stoddart, "British Nuclear Strategy during the Cold War."

96. Howard, "Reassurance and Deterrence," 313.

97. Maurice Vaïsse, "La France et l'OTAN: une histoire," *Politique Étrangère*, 4 (2009): 862.

98. Marcel Duval, "Les décisions concernant l'armement nucléaire: pourquoi, comment et quand?" in *Armement et Vème République: fin des années 1950–fin des années 1960*, ed. Maurice Vaïsse (Paris: CNRS Éditions, 2002), 298; Philip Gordon, "Charles de Gaulle and the Nuclear Revolution," in *Cold War Statesmen Confront the Bomb: Nuclear Diplomacy since 1945*, ed. John Gaddis et al. (Oxford: Oxford University Press, 1999), 218.

99. The first thermonuclear test took place in Fangataufa in the Pacific on August 24, 1968. Duval, "Les décisions concernant l'armement nucléaire," 299.

100. Vaïsse, "Indépendance et solidarité 1958–1963," 225.

101. Duval, "Les décisions concernant l'armement nucléaire," 297; Jacques Chevallier, "La genèse de la force de dissuasion nucléaire française," *Armement et Vème République: fin des années 1950–fin des années 1960* (Paris: CNRS Éditions, 2002), 282. Maurice Vaïsse sees a shift to a "forced march" toward nuclear weapons in mid-1959: "Indépendance et solidarité 1958–1963," 230.

102. It is significant that key members of the government he composed in June 1954 were strong proponents of the development of French nuclear weapons: General (Marie)-Pierre Koenig, Minister of National Defense; Diomède Catroux, Secretary of State in charge of the air; and Jacques Chaban-Delmas, Minister of Public Works, Transport and Tourism. It is significant that Chaban-Delmas told Aline Coutrot he had explicitly conditioned his joining the government on pro–nuclear weapons measures. Aline Coutrot, "La politique atomique sous le gouvernement de Mendès France," in *Pierre Mendès France et le Mendésisme*, *l'expérience gouvernementale*, ed. François Bédarida and Jean-Pierre Rioux, (Paris: Fayard, 1985), 310. In 1952, Antoine Pinay and Félix Gaillard had proposed the energy plan, which would guarantee the production of enough plutonium to consider military applications. Dominique Mongin, *La bombe atomique française. 1945–1958* (Brussels: Bruylant, 1997)167, 295; Soutou, "Les accords de 1957 et 1958," writes about military ulterior motives for this energy plan already.

103. Georges-Henri Soutou, "La politique nucléaire de Pierre Mendès France," *Relations internationales* 59 (1989): 91–92.

104. Soutou, "La politique nucléaire de Pierre Mendès France," 99–100; Holloway, "Nuclear Weapons and the Escalation of the Cold War, 1945–1962," 390; Robert Frank, "De la puissance," in *Deux passions françaises: Pierre Mendès-France and Charles de Gaulle*, ed. Robert Frank and Eric Roussel, (Paris: CNRS Éditions, 2014), 309.

105. Soutou, "La politique nucléaire de Pierre Mendès France," 93–96. For more on the origins and development of this office, see Jean-Damien Pô, *Les moyens de la puissance: Les activites militaires du CEA (1945–2000)* (Paris: Ellipses, 2000), 58–68.

106. See Jean Lacouture, *Pierre Mendès France* (Paris: Seuil, 1981), 360–1. Several participants in the meeting gave contradictory accounts. See Coutrot, "La politique atomique sous le gouvernement de Mendès France," 309–16; Marcel Duval and Dominique Mongin, *Histoire des forces nucléaires françaises* (Paris : PUF, 1993), 32–36; Vincent Duclert, "Pierre Mendès France et la recherche scientifique," in *Le gouvernement de la recherche: Histoire d'un engagement politique, de Pierre Mendès France au Général de Gaulle*, ed. Alain Chatriot and Vincent Duclert, (Paris: La Découverte, 2006), 48–49; Gabrielle Hecht, *The Radiance of France: Nuclear Power and National Identity after World War II* (Cambridge, MA: MIT Press, 1998), 76. In *Le mal français* (Paris: Plon, 1976), 288–91, Alain Peyrefitte offers a middle-ground interpretation when he crafts the analogy with a decision made under hypnosis.

107. On money transfers, see Duval, "Les décisions concernant l'armement nucléaire," 294.

108. Mongin, *La bombe atomique française*, 362–66; Chaban-Delmas, *Mémoires pour demain*, 218.

109. Yves Rocard, *Mémoires sans concession* (Paris: Grasset, 1988), 177.

110. Mongin, *La bombe atomique francaise*, 445; Claude Carlier, *L'aéronautique française 1945–1975* (Paris: Charles Lavauzelle, 1983), 204.

111. Mongin, *La bombe atomique française*, 411–13.

112. Grégoire Mallard, "L'Europe puissance nucléaire: cet obscur objet du désir," *Critique internationale* no. 42 (2009): 157–58; Soutou, "Les accords de 1957 et 1958," 2–3.

113. Charles Ailleret, *L'aventure atomique française* (Paris: Grasset, 1968), 226.

114. Soutou, "Les accords de 1957 et 1958"; Leopoldo Nuti, "The F-I-G Story Revisited," in Leopoldo Nuti and Cyril Buffet (eds.), *Dividing the Atom: Essays on the History of Nuclear Proliferation in Europe*. A Special Issue of the Journal *Storia delle Relazioni Internazionali* 13, no. 1 (1998): 69–100. Eminent members of the French foreign ministry and other government members did not see such cooperation as detached from US policy.

115. Mongin, *La bombe atomique francaise*, 453; Maurice Vaïsse, "Le choix atomique de la France," *Vingtième siècle: revue d'histoire* 36 no.1 (1992): 21; Maurice Vaïsse, "Jacques Chaban-Delmas ministre de la Défense nationale (novembre 1957–mai 1958)," in *Jacques Chaban-Delmas en politique*, ed. Bernard Lachaise, Gilles Le Béguec, and Jean-François Sirinelli (Paris: Presses Universitaires, 2007), 107; Aline Coutrot, "La création du commissariat à l'énergie atomique," *Revue française de science politique* 31 no. 2 (1981): 369.

116. Vaïsse, "Le choix atomique de la France," 23; Heuser, *NATO, Britain, France and the FRG*, 94; Heuser, *Nuclear Mentalities?*, 75; Scott Sagan, "Why Do States Build Nuclear Weapons? Three Models in Search of a Bomb," *International Security* 21, no. 3

(Winter 1996/97): 76–80. For the opposing point of view, see Bruno Tertrais, "Destruction assurée": The origins and development of French nuclear strategy," in *Getting MAD: Nuclear Mutual Assured Destruction, Its Origins and Practice*, ed. Henry Sokolski (Carlisle, PA: US Army War College, 2004), 56–58, in particular 56, footnote 19.

117. Frank, "De la puissance," 324, 326 (my translation).

118. Soutou "Les accords de 1957 et 1958," 5–7; Nuti, "The F-I-G Story Revisited."

119. Quoted in Vaïsse, "Jacques Chaban-Delmas ministre de la Défense nationale," 106, 110.

120. See Ledwige, *De Gaulle et les Américains*.

121. For an approach insisting on the prospect of Germany rearming and the role of Mendès, see Jacques Hymans, *Psychology of Nuclear Proliferation* (Cambridge, Mass: Cambridge University Press, 2006), chapter 4. On the importance of the prospect of Germany rearming, see also Vaïsse, "Le choix atomique de la France," 25; and Charles Cogan, "American-French Intelligence Relations and the French Nuclear Deterrent," *Journal of Intelligence History* 3, no. 1 (Summer 2003): 57–58. On the role of the Soviet threat of invasion as another reason for an independent nuclear arsenal, Frank, "De la puissance," 328.

122. Duval, "Les décisions concernant l'armement nucléaire," 297, 304. I imply here that this lack of interest in the discussions around nuclear deterrence suggests a distance vis-à-vis the nuclear straitjacket.

123. Mongin, *La bombe atomique francaise*, 442.

124. Note from Etienne de Croüy-Chanel, November 10, 1956, translated from the quote in Maurice Vaïsse, "Post-Suez France," in *Suez 1956: The Crisis and Its Consequences*, ed. W. M. Roger Louis and Roger Owens (Oxford: Clarendon Press, 1991), 338. De Gaulle would express this view of the peril of a US protectorate in public at a press conference on April 7, 1954, and again after that. He discussed it with General James Gavin, US ambassador to France, in an interview on May 26, 1962. With Gavin, he argued that France could see that the US were engaged and France did not fear potential US isolationism. He added that "it is rather the opposite that France fears, it is excessive intervention in the Western Alliance, i.e. an American hegemony" openly stated in the President's words, and which is destined to last and expand. The quote from the press conference can be found in Charles de Gaulle, *Mémoires d'espoir, suivies d'allocutions et messages sous la IVème et Vème République* (Paris: Plon 1999), 575–76 and the summary of the meeting with Gavin can be found in Archives of the Presidency of the French Republic, AG5(1)/720, folder "Etats-Unis", "Audience de M. Gavin, Ambassadeur des Etats-Unis le 26 mai 1962", 3–4 [my translation] . See also Vaïsse, "Indépendance et solidarité 1958–1963," 237. Admiral Marcel Duval supports this view of the primacy of independence regarding the American trusteeship in de Gaulle's views about nuclear weapons, "Les décisions concernant l'armement nucléaire," 297.

125. Vaïsse, "Post-Suez France," 338.

126. Vaïsse, "Un dialogue de sourds," 412–16; Maddock, *Nuclear Apartheid*, 130.

127. However, Jacques Chaban-Delmas seems to have used the nuclear straitjacket to convince Guy Mollet to support the project. Had the US positive security guarantee been durably credible, we would not have had to develop an independent nuclear force. Patrick and Philippe Chastenet, *Chaban* (Paris: Seuil, 1991), 214.

128. See Jacques Hymans, *Achieving Nuclear Ambitions: Scientists, Politicians and Proliferation* (Cambridge: Cambridge University Press, 2012).

129. William Potter, "Back to the Future: The Contemporary Relevance of the Nuclear Renunciation Decisions of Ukraine, Belarus and Kazakhstan," Paper for the Nobel Institute Conference on *The Spread of Nuclear Weapons: Past Experience and Future Challenges*, Oslo, 2009, 38.

130. For more on the proliferation paradigm, see Benoît Pelopidas, "The Oracles of Proliferation," *Nonproliferation Review* 18, no. 1 (Spring 2011). Another rationale supporting extended nuclear deterrence as a nonproliferation policy is that "the number of states seeking or obtaining the protection offered by the extended deterrent may increase as the size of nuclear forces providing that extended deterrent diminishes." David J. Trachtenberg, "U.S. Extended Deterrence: How Much Strategic Force Is Too Little?" *Strategic Studies Quarterly* 6, no. 2 (Summer 2012): 88.